

ABSTRACT**ANTIVIRAL ACTIVITY OF MARINE SPONGE *Microxina subtilis* FRACTION AGAINST HEPATITIS C VIRUS AND IDENTIFICATION OF SECONDARY METABOLITES IN ACTIVE FRACTION**

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The result of preliminary study indicated that ethyl acetate extract of *Microxina subtilis* sponge had potential antivirus activity on hepatitis C virus with IC_{50} value of 40.50 $\mu\text{g/mL}$. In this study, the fraction of ethyl acetate extract of *M. subtilis* was tested against hepatitis C JFH1 virus on hepatocyte cell culture Huh7it. The antiviral activity was assessed based on the value of percentage of inhibition by comparing the difference between the number of infected cells on the control and the number of infected cells on the negative control. The result indicated that based on the concentration of 100 $\mu\text{g/mL}$, there were 3 fractions obtained from the total of 7 fractions, namely fractions number 5, 6 and 7 which showed inhibition activity with % value of 36.8 ± 3.3 %; 89.2 ± 7.4 % and 80.7 ± 8.7 % respectively, while the other 4 fractions had no inhibition activity. Fraction number 6 and 7 which had % inhibition of more than 50% were identified to discover the compounds contained. The compounds were expected to had role on antivirus activity. The analysis of compound using ^1H NMR spectroscopy showed that both fraction had the same main compound, namely fatty acid groups. Fraction 7 was identified with the combination of gas chromatography (GC) and mass spectroscopy. The analysis results using GC-MS indicated that the fatty acid group compounds were hexadecanoic acid; heptadecanoic acid; 9,12,15-octadecatrienoic acid; octadecanoic acid; eicosanoic acid and 8,11-octadecadienoic acid.

Keywords: antivirus, HCV, marine sponge, *Microxina subtilis*, GC-MS, ^1H NMR, fatty acid